



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,457	06/01/2001	David R. Miller	041581-2002	3014
36412	7590	09/05/2006	EXAMINER	
DUCKOR SPRADLING METZGER 401 WEST A STREET, SUITE 2400 SAN DIEGO, CA 92101-7915			CORRIELUS, JEAN M	
			ART UNIT	PAPER NUMBER
			2162	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,457

Applicant(s)

MILLER ET AL.

Examiner

Jean M. Corrielus

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/19/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment filed on June 19, 2006, in which claims 1-13 are presented for further examination.

Response to Arguments

2. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed. In particular, the claimed feature of "said optimal consumer cluster set having a plural of optimal consumer clusters, wherein each consumer in the set of consumers is included in only one of the consumer clusters in each consumer cluster set", and the limitation as claimed in claims 1, 4 and 7 are not described in the specification to enable one having ordinary skill in the art to make and use the invention. The specification paragraph [0018] defines the use of classifying consumers in clusters comprising generating a plurality of classification trees based on

Art Unit: 2162

demographic data for a set of consumers and behavioral data for a set of consumers, each of the classification trees producing a consumer cluster set, searching the consumer cluster sets for an optimal consumer cluster set, the optimal consumer cluster set having a plurality of clusters of consumers. So, the consumers in each cluster of the plurality of clusters have substantially similar behavioral and demographic characteristics to each other and different behavioral or demographic characteristics from consumers in all other clusters of the plurality of clusters. It is clear that such abovementioned of the specification does not provide the use wherein the optimal consumer cluster set having a plurality of optimal consumer cluster, wherein each consumer in the set of consumers is included in only one of the consumer clusters in each consumer cluster set. Based on the analysis provided above and substantial evidence or reasoning, the examiner provided that one having ordinary skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. The limitation as claimed in claims 1, 4 and 7

“said optimal consumer cluster set having a plural of optimal consumer clusters, wherein each consumer in the set of consumers is included in only one of the consumer clusters in each consumer cluster set” are not supported by the as-filed disclosure, which is violated the written description requirement. In re Rasmussen, 650 F.2d 1212, 211 USPQ 323 (CCPA 1981). Applicant should duly note that the first paragraph of 35 U.S.C. 112 requires that the “specification shall contain a written description of the invention”. Applicant should also note that the essential goal of the description of the invention requirement is to clearly convey the information that an applicant has invented the subject matter which is claimed; and to put the public in possession of what the applicant claims as the invention.” Furthermore, the written description requirement of the Patent Act promotes the progress of the useful arts by ensuring

Art Unit: 2162

that patentees adequately describe their inventions in their patent specifications in exchange for the right to exclude others from practicing the invention for the duration of the patent's term.

Indeed, the specification does not satisfy the written description requirement because the specification does not describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lazarus et al., (hereinafter “Lazarus”).

As to claims 1 and 4, Lazarus discloses “generating a plurality of classification trees based on behavioral and demographic data for a set of consumers, each of said classification trees producing a consumer cluster set” creating a predictive model of future spending in each merchant segment based on transaction statistics of historical spending in the merchant segment (group) by those consumers who have purchased from merchants in the segments (col.3, lines 5-25; col.4, lines 12-37 and the ability to model consumer financial behavior based on actual historical spending patterns that reflect the time-related nature of each consumer’s purchase (col.2, lines 23-30). Applicant should duly note that the term of classification refers to the problem of predicting the number of sets to which an item belongs by building a model based on

Art Unit: 2162

some predictor variables. Lazarus discloses “searching said consumer cluster sets for an optimal consumer cluster set that optimizes a measure of the behavioral and demographic data, said optimal consumer cluster set having a plurality of optimal consumer clusters, wherein each consumer in the set of consumers is included in only one of the consumer clusters in each consumer cluster set” (col.11, lines 56-65; col.14, lines 44-51); “wherein consumers in each cluster of said plurality of cluster have substantially similar behavioral characteristics to each other and different behavioral characteristics from the consumers in all other clusters of said plurality of cluster” by provides a quantifiable analysis, based on high-dimension vector representations by classifying both consumers and merchants with demographic labels, wherein the consumer vector can be clustered, so that similar consumer, based on their purchasing behavior, form a merchant segment (see col.28, lines 12-17; col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12).

As to claim 7, Lazarus discloses the claimed “a profile definitions module for supplying profile definitions to said partitioning module for use in creating classification trees” (see col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12; col.12, lines 57-62; col.11, lines 48-66; col.15, line 64-col.16, lines 7); “a profile data module for supplying profile data to said partitioning module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12; col.12, lines 57-62; col.11, lines 48-66; col.15, line 64-col.16, lines 7); “a segment definitions module for supplying segment definitions data to said partitioning module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-

Art Unit: 2162

12, lines 24-28; col.12, lines 57-62); “wherein said partition module generates an optimal classification tree that optimizes a measure of the behavior and demographic data resulting in a plurality of consumer clusters with consumers in each cluster of said plurality of cluster have substantially similar behavioral characteristics to each other and different behavioral characteristics from the consumers in all other clusters of said plurality of cluster” by providing a quantifiable analysis, based on high-dimension vector representations by classifying both consumers and merchants with demographic labels, wherein the consumer vector can be clustered, so that similar consumer, based on their purchasing behavior, form a merchant segment (see col.28, lines 12-17; col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12) and creating a predictive model of future spending in each merchant segment based on transaction statistics of historical spending in the merchant segment (group) by those consumers who have purchased from merchants in the segments (col.3, lines 5-25; col.4, lines 12-37 and the ability to model consumer financial behavior based on actual historical spending patterns that reflect the time-related nature of each consumer’s purchase (col.2, lines 23-30). Applicant should duly note that the term of classification refers to the problem of predicting the number of sets to which an item belongs by building a model based on some predictor variables.

As to claim 8, Lazarus discloses the claimed “a summarization module adapted to generate summary data, said summary data being a summarization of data contained in said cluster assignments module” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12, lines 24-28; col.12, lines 57-62); and a

Art Unit: 2162

summary data module adapted to store said summary data” (see col.1, lines 35-47; col.3, lines 1-6 and lines 55-57; col.4, lines 12-42; col.5, lines 28-31; col.9, lines 55-67; col.10, lines 1-12, lines 24-28; col.12, lines 57-62).

As to claim 9, Lazarus discloses the claimed “wherein said profile definitions module comprises a database” (col.10, lines 24-27).

As to claim 10, Lazarus discloses the claimed “wherein said profile data module comprises an electronic file” (col.10, lines 22-24).

As to claim 11, Lazarus discloses the claimed “wherein said segment definitions module comprises a dbase file” (col.13, line 15-col.15, line 22).

As to claim 12, Lazarus discloses the claimed “wherein said cluster assignments module comprises a dbase table” (col.13, line 15-col.15, line 22).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2162

8. Claims 2, 3, 5, 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazarus et al., (hereinafter "Lazarus") US Patent no. 6,430,539 and Zhang, article entitled "Classification trees".

As to claims 2 and 5, Lazarus does not explicitly disclose the use that the classification tree Zhang's methodology. Zhang discloses the claimed "classification trees using Zhang's methodology" (page 181, section 2.2; fig.3; fig.4; fig.5) Zhang, on the other hand, discloses the use of creating a classification a plurality of classification tree base on demographics and behavior data (page 181, section 2.2; fig.3; fig.4; fig.5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of the cited references. Such a combination would provide Applicant's admitted prior art the enhanced capability of increasing the accuracy of prediction.

As to claim 3 and 6, Zhang discloses the claimed "wherein said searching using Zhang's methodology" (page 181, section 2.2; fig.3; fig.4; fig.5).

As to claim 13, Zhang discloses the claimed "wherein said partitioning module uses Zhang's methodology to create classification trees" (page 181, section 2.2; fig.3; fig.4; fig.5).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

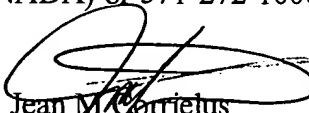
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (571) 272-4032. The examiner can normally be reached on 10 hours shift.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2162

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jean M. Corriellus
Primary Examiner
Art Unit 2162

August 31, 2006